

Sequence Listing

<110> Baker, Kevin
Botstein, David
Eaton, Dan
Ferrara, Napoleone
Filvaroff, Ellen
Gerritsen, Mary
Goddard, Audrey
Godowski, Paul
Grimaldi, Christopher
Gurney, Austin
Hillan, Kenneth
Kljavin, Ivar
Napier, Mary
Roy, Margaret
Tumas, Daniel
Wood, William

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50 55 60
Pro Arg Ser His Phe Phe Pro Phe Asp Leu Phe Pro Met Cys Pro
65 70 75
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80 85 90
Gly Leu Thr Ser Val Pro Thr Asn Ile Pro Phe Asp Thr Arg Met
95 100 105
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110 115 120
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140 145 150
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155 160 165
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170 175 180
Lys Val Lys Lys Ile Gln Lys Asp Thr Phe Lys Gly Met Asn Ala
185 190 195
Leu His Val Leu Glu Met Ser Ala Asn Pro Leu Asp Asn Asn Gly
200 205 210

Ile Glu Pro Gly Ala Phe Glu Gly Val Thr Val Phe His Ile Arg
215 220 225

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Thr Leu Leu Glu Leu His Leu Asp Tyr Asn Lys Ile Ser Thr Val
245 250 255

Glu Leu Glu Asp Phe Lys Arg Tyr Lys Glu Leu Gln Arg Leu Gly
260 265 270

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Asn Ile Pro Arg Val Arg Glu Ile His Leu Glu Asn Asn Lys Leu
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Lys Lys Ile Pro Ser Gly Leu Pro Glu Leu Lys Tyr Leu Gln Ile
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Phe Cys Pro Thr Val Pro Lys Met Lys Lys Ser Leu Tyr Ser Ala
335 340 345

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Asp Glu Thr Trp His Pro Asp Leu Gly Gln Pro Phe Gly Val Met
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Arg Cys Val Leu Cys Ala Cys Glu Ala Pro Gln Trp Gly Arg Arg
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635	640	645
His Ile Ala Asn Gln Cys Glu Val Gly Gly Leu Arg Leu Glu Ala		
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695							700							705
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<210> 15

<211> 737

<212> PRT

<213> Homo Sapien

<400> 15

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Ser	Ser	Leu	Ala	Asn	Pro	Val	Pro	Ala	Ala	Pro	Leu	Ser	Ala	Pro
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Gly	Pro	Cys	Ala	Ala	Gln	Pro	Cys	Arg	Asn	Gly	Gly	Val	Cys	Thr
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Ser	Arg	Pro	Glu	Pro	Asp	Pro	Gln	His	Pro	Ala	Pro	Ala	Gly	Glu
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Pro	Gly	Tyr	Ser	Cys	Thr	Cys	Pro	Ala	Gly	Ile	Ser	Gly	Ala	Asn
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Cys	Gln	Leu	Val	Ala	Asp	Pro	Cys	Ala	Ser	Asn	Pro	Cys	His	His
								95			100		105	

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125	130	135
Leu Pro Ser Leu Pro Ala Thr Gly Trp Thr Glu Ser Met Ala Pro		
140	145	150
Arg Gln Leu Gln Pro Val Pro Ala Thr Gln Glu Pro Asp Lys Ile		
155	160	165
Leu Pro Arg Ser Gln Ala Thr Val Thr Leu Pro Thr Trp Gln Pro		
170	175	180
Lys Thr Gly Gln Lys Val Val Glu Met Lys Trp Asp Gln Val Glu		
185	190	195
Val Ile Pro Asp Ile Ala Cys Gly Asn Ala Ser Ser Asn Ser Ser		
200	205	210
Ala Gly Gly Arg Leu Val Ser Phe Glu Val Pro Gln Asn Thr Ser		
215	220	225
Val Lys Ile Arg Gln Asp Ala Thr Ala Ser Leu Ile Leu Leu Trp		
230	235	240
Lys Val Thr Ala Thr Gly Phe Gln Gln Cys Ser Leu Ile Asp Gly		
245	250	255
Arg Ser Val Thr Pro Leu Gln Ala Ser Gly Gly Leu Val Leu Leu		
260	265	270
Glu Glu Met Leu Ala Leu Gly Asn Asn His Phe Ile Gly Phe Val		
275	280	285
Asn Asp Ser Val Thr Lys Ser Ile Val Ala Leu Arg Leu Thr Leu		
290	295	300
Val Val Lys Val Ser Thr Cys Val Pro Gly Glu Ser His Ala Asn		
305	310	315
Asp Leu Glu Cys Ser Gly Lys Gly Lys Cys Thr Thr Lys Pro Ser		
320	325	330
Glu Ala Thr Phe Ser Cys Thr Cys Glu Glu Gln Tyr Val Gly Thr		
335	340	345
Phe Cys Glu Glu Tyr Asp Ala Cys Gln Arg Lys Pro Cys Gln Asn		
350	355	360
Asn Ala Ser Cys Ile Asp Ala Asn Glu Lys Gln Asp Gly Ser Asn		
365	370	375
Phe Thr Cys Val Cys Leu Pro Gly Tyr Thr Gly Glu Leu Cys Gln		
380	385	390
Ser Lys Ile Asp Tyr Cys Ile Leu Asp Pro Cys Arg Asn Gly Ala		
395	400	405

Thr Cys Ile Ser Ser Leu Ser Gly Phe Thr Cys Gln Cys Pro Glu
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 Gly Tyr Phe Gly Ser Ala Cys Glu Glu Lys Val Asp Pro Cys Ala
 425 430 435
 Ser Ser Pro Cys Gln Asn Asn Gly Thr Cys Tyr Val Asp Gly Val
 440 445 450
 His Phe Thr Cys Asn Cys Ser Pro Gly Phe Thr Gly Pro Thr Cys
 455 460 465
 Ala Gln Leu Ile Asp Phe Cys Ala Leu Ser Pro Cys Ala His Gly
 470 475 480
 Thr Cys Arg Ser Val Gly Thr Ser Tyr Lys Cys Leu Cys Asp Pro
 485 490 495
 Gly Tyr His Gly Leu Tyr Cys Glu Glu Glu Tyr Asn Glu Cys Leu
 500 505 510
 Ser Ala Pro Cys Leu Asn Ala Ala Thr Cys Arg Asp Leu Val Asn
 515 520 525
 Gly Tyr Glu Cys Val Cys Leu Ala Glu Tyr Lys Gly Thr His Cys
 530 535 540
 Glu Leu Tyr Lys Asp Pro Cys Ala Asn Val Ser Cys Leu Asn Gly
 545 550 555
 Ala Thr Cys Asp Ser Asp Gly Leu Asn Gly Thr Cys Ile Cys Ala
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 Pro Gly Phe Thr Gly Glu Glu Cys Asp Ile Asp Ile Asn Glu Cys
 575 580 585
 Asp Ser Asn Pro Cys His His Gly Gly Ser Cys Leu Asp Gln Pro
 590 595 600
 Asn Gly Tyr Asn Cys His Cys Pro His Gly Trp Val Gly Ala Asn
 605 610 615
 Cys Glu Ile His Leu Gln Trp Lys Ser Gly His Met Ala Glu Ser
 620 625 630
 Leu Thr Asn Met Pro Arg His Ser Leu Tyr Ile Ile Ile Gly Ala
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 Leu Cys Val Ala Phe Ile Leu Met Leu Ile Ile Leu Ile Val Gly
 650 655 660
 Ile Cys Arg Ile Ser Arg Ile Glu Tyr Gln Gly Ser Ser Arg Pro
 665 670 675
 Ala Tyr Glu Glu Phe Tyr Asn Cys Arg Ser Ile Asp Ser Glu Phe
 680 685 690
 Ser Asn Ala Ile Ala Ser Ile Arg His Ala Arg Phe Gly Lys Lys

695 700 705

Ser Arg Pro Ala Met Tyr Asp Val Ser Pro Ile Ala Tyr Glu Asp
710 715 720

Tyr Ser Pro Asp Asp Lys Pro Leu Val Thr Leu Ile Lys Thr Lys
725 730 735

Asp Leu

<210> 16
<211> 43
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 16
tgtaaaacga cggccagttt aatagacctg caattattaa tct 43

<210> 17
<211> 41
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 17
cagggaaacag ctatgaccac ctgcacacacct gcaaattccat t 41

<210> 18
<211> 508
<212> DNA
<213> Homo Sapien

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acgaaaagtgt gaccccccctt tcagggtttc agggggactg gtccctcctgg 100

aggagatgtc cgccttgggg aataaatcaact ttattggttt tgtgaatgtat 150

tctgtgacta agtctattgt ggctttgcgc ttaactctgg tggtaaggt 200

cagcacctgt gtgccggggg agagtcacgc aaatgacttg gagtgttcag 250

gaaaaggaaa atgcaccacg aagccgtcag aggcaacttt ttccctgtacc 300

tgtgaggagc agtacgtggg tactttctgt gaagaatacg atgcttgcca 350

gagggaaacct tgccaaaaca acgcgagctg tattgatgca aatgaaaagc 400

aagatggagc caatttcacc tgtgtttgcc ttccctggta tactggagag 450

ctttgccaac cgaactgaga ttggagcgaa cgacctacac cgaactgaga 500

tagggag 508

<210> 19
<211> 508
<212> DNA
<213> Homo Sapien

<400> 19
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tctgtgacta agtctattgt ggcttgcgcc ttaactctgg tggtaaggt 200
cagcacctgt gtgcgggggg agagtcacgc aaatgacttg gagtgttcag 250
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tgtgaggagc agtacgtggg tactttctgt gaagaatacg atgcttgcca 350
gagaaaaacct tgccaaaaca acgcgagctg tattgatgca aatgaaaagc 400
aagatgggag caatttcacc tgtgttgcc ttccctggta tactggagag 450
cttgccaaac cgaactgaga ttggagcgaa cgacctacac cgaactgaga 500
tagggag 508

<210> 20
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 20
ctctggaagg tcacggccac agg 23

<210> 21
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 21
ctcagttcggttggcaaagc tctc 24

<210> 22
<211> 69
<212> DNA
<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 22

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gctttgccaa ccgaactga 69

<210> 23

<211> 1520

<212> DNA

<213> Homo Sapien

<400> 23

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<210> 24

<211> 433

<212> PRT

<213> Homo Sapien

<400> 24

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Pro Leu Val Asp Gly His Asn Asp Leu Pro Leu Val Leu Arg Gln
35 40 45

Val Tyr Gln Lys Gly Leu Gln Asp Val Asn Leu Arg Asn Phe Ser
50 55 60

Tyr Gly Gln Thr Ser Leu Asp Arg Leu Arg Asp Gly Leu Val Gly
65 70 75

Ala Gln Phe Trp Ser Ala Tyr Val Pro Cys Gln Thr Gln Asp Arg
80 85 90

Asp Ala Leu Arg Leu Thr Leu Glu Gln Ile Asp Leu Ile Arg Arg
95 100 105

Met Cys Ala Ser Tyr Ser Glu Leu Glu Leu Val Thr Ser Ala Lys
110 115 120

Ala Leu Asn Asp Thr Gln Lys Leu Ala Cys Leu Ile Gly Val Glu
125 130 135

Gly Gly His Ser Leu Asp Asn Ser Leu Ser Ile Leu Arg Thr Phe
140 145 150

Tyr Met Leu Gly Val Arg Tyr Leu Thr Leu Thr His Thr Cys Asn
155 160 165

Thr Pro Trp Ala Glu Ser Ser Ala Lys Gly Val His Ser Phe Tyr
170 175 180

Asn	Asn	Ile	Ser	Gly	Leu	Thr	Asp	Phe	Gly	Glu	Lys	Val	Val	Ala
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Glu	Met	Asn	Arg	Leu	Gly	Met	Met	Val	Asp	Leu	Ser	His	Val	Ser
200														210
Asp	Ala	Val	Ala	Arg	Arg	Ala	Leu	Glu	Val	Ser	Gln	Ala	Pro	Val
215														225
Ile	Phe	Ser	His	Ser	Ala	Ala	Arg	Gly	Val	Cys	Asn	Ser	Ala	Arg
230														240
Asn	Val	Pro	Asp	Asp	Ile	Leu	Gln	Leu	Leu	Lys	Lys	Asn	Gly	Gly
245														255
Val	Val	Met	Val	Ser	Leu	Ser	Met	Gly	Val	Ile	Gln	Cys	Asn	Pro
260														270
Ser	Ala	Asn	Val	Ser	Thr	Val	Ala	Asp	His	Phe	Asp	His	Ile	Lys
275														285
Ala	Val	Ile	Gly	Ser	Lys	Phe	Ile	Gly	Ile	Gly	Gly	Asp	Tyr	Asp
290														300
Gly	Ala	Gly	Lys	Phe	Pro	Gln	Gly	Leu	Glu	Asp	Val	Ser	Thr	Tyr
305														315
Pro	Val	Leu	Ile	Glu	Glu	Leu	Leu	Ser	Arg	Gly	Trp	Ser	Glu	Glu
320														330
Glu	Leu	Gln	Gly	Val	Leu	Arg	Gly	Asn	Leu	Leu	Arg	Val	Phe	Arg
335														345
Gln	Val	Glu	Lys	Val	Gln	Glu	Glu	Asn	Lys	Trp	Gln	Ser	Pro	Leu
350														360
Glu	Asp	Lys	Phe	Pro	Asp	Glu	Gln	Leu	Ser	Ser	Ser	Cys	His	Ser
365														375
Asp	Leu	Ser	Arg	Leu	Arg	Gln	Arg	Gln	Ser	Leu	Thr	Ser	Gly	Gln
380														390
Glu	Leu	Thr	Glu	Ile	Pro	Ile	His	Trp	Thr	Ala	Lys	Leu	Pro	Ala
395														405
Lys	Trp	Ser	Val	Ser	Glu	Ser	Ser	Pro	His	Met	Ala	Pro	Val	Leu
410														420
Ala	Val	Val	Ala	Thr	Phe	Pro	Val	Leu	Ile	Leu	Trp	Leu		
425														

<210> 25

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 25
agttctggtc agcctatgtg cc 22

<210> 26
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 26
cgtgatggtg tctttgtcca tggg 24

<210> 27
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 27
ctccaccaat cccgatgaac ttgg 24

<210> 28
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 28
gaggcattt acctcatacg ccgcattgtgt gcctcctatt ctgagctgga 50

<210> 29
<211> 1416
<212> DNA
<213> Homo Sapien

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gatcccgccgc cgcaattct aaaccaacat gccccacc tacgtccct 100
cgaccacact cagtagtccc agcacccagg gcctgcaaga gcaggcacgg 150
gccctgatgc gggacttccc gctcgtggac ggccacaacg acctgcccct 200
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aaaacccaag gacacc 1416

<210> 30
<211> 446
<212> PRT
<213> Homo Sapien

<400> 30
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20 25 30
Pro Leu Val Asp Gly His Asn Asp Leu Pro Leu Val Leu Arg Gln
35 40 45
Val Tyr Gln Lys Gly Leu Gln Asp Val Asn Leu Arg Asn Phe Ser

50	55	60
Tyr Gly Gln Thr Ser Leu Asp Arg Leu Arg Asp Gly Leu Val Gly		
65	70	75
Ala Gln Phe Trp Ser Ala Tyr Val Pro Cys Gln Thr Gln Asp Arg		
80	85	90
Asp Ala Leu Arg Leu Thr Leu Glu Gln Ile Asp Leu Ile Arg Arg		
95	100	105
Met Cys Ala Ser Tyr Ser Glu Leu Glu Leu Val Thr Ser Ala Lys		
110	115	120
Ala Leu Asn Asp Thr Gln Lys Leu Ala Cys Leu Ile Gly Val Glu		
125	130	135
Gly Gly His Ser Leu Asp Asn Ser Leu Ser Ile Leu Arg Thr Phe		
140	145	150
Tyr Met Leu Gly Val Arg Tyr Leu Thr Leu Thr His Thr Cys Asn		
155	160	165
Thr Pro Trp Ala Glu Ser Ser Ala Lys Gly Val His Ser Phe Tyr		
170	175	180
Asn Asn Ile Ser Gly Leu Thr Asp Phe Gly Glu Lys Val Val Ala		
185	190	195
Glu Met Asn Arg Leu Gly Met Met Val Asp Leu Ser His Val Ser		
200	205	210
Asp Ala Val Ala Arg Arg Ala Leu Glu Val Ser Gln Ala Pro Val		
215	220	225
Ile Phe Ser His Ser Ala Ala Arg Gly Val Cys Asn Ser Ala Arg		
230	235	240
Asn Val Pro Asp Asp Ile Leu Gln Leu Leu Lys Lys Asn Gly Gly		
245	250	255
Val Val Met Val Ser Leu Ser Met Gly Val Ile Gln Cys Asn Pro		
260	265	270
Ser Ala Asn Val Ser Thr Val Ala Asp His Phe Asp His Ile Lys		
275	280	285
Ala Val Ile Gly Ser Lys Phe Ile Gly Ile Gly Gly Asp Tyr Asp		
290	295	300
Gly Ala Gly Lys Phe Pro Gln Gly Leu Glu Asp Val Ser Thr Tyr		
305	310	315
Pro Val Leu Ile Glu Glu Leu Leu Ser Arg Gly Trp Ser Glu Glu		
320	325	330
Glu Leu Gln Gly Val Leu Arg Gly Asn Leu Leu Arg Val Phe Arg		
335	340	345

Gln Val Glu Lys Val Gln Glu Glu Asn Lys Trp Gln Ser Pro Leu
350 355 360
Glu Asp Lys Phe Pro Asp Glu Gln Leu Ser Ser Ser Cys His Ser
365 370 375
Asp Leu Ser Arg Leu Arg Gln Arg Gln Ser Leu Thr Ser Gly Gln
380 385 390
Glu Leu Thr Glu Ile Pro Ile His Trp Thr Ala Lys Leu Pro Ala
395 400 405
Lys Trp Ser Val Ser Glu Ser Ser Pro His Pro Asp Lys Thr His
410 415 420
Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser
425 430 435
Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
440 445

<210> 31

<211> 1790

<212> DNA

<213> Homo Sapien

<400> 31

cgcccaagcga cgtgcgggcg gcctggcccc cgccctcccc cgcccgccct 50
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ccggcagcg ccggccccat gcccggccgc cgccggggcc ccggccggca 150
atccgcgcgg cggccgcgc cgttgctgcc cctgctgctg ctgctctgcg 200
tcctcggggc gcccgcagcc ggatcaggag cccacacagc tgtgatcagt 250
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tgagctatTTT aggtgctgtt attgtaaaaaaa aaaaaaaaaaaa 1750
aaaaaaaaaaa aaaaaaaaaaaa aaaaacaaaaa aaaaaaaaaaaa 1790

<210> 32
<211> 422
<212> PRT
<213> Homo Sapien

<400> 32
Met Pro Ala Gly Arg Arg Gly Pro Ala Ala Gln Ser Ala Arg Arg
1 5 10 15

Pro Pro Pro Leu Leu Pro Leu Leu Leu Leu Cys Val Leu Gly
20 25 30

Ala Pro Arg Ala Gly Ser Gly Ala His Thr Ala Val Ile Ser Pro
35 40 45

Gln Asp Pro Thr Leu Leu Ile Gly Ser Ser Leu Leu Ala Thr Cys
50 55 60

Ser	Val	His	Gly	Asp	Pro	Pro	Gly	Ala	Thr	Ala	Glu	Gly	Leu	Tyr
					65					70			75	
Trp	Thr	Leu	Asn	Gly	Arg	Arg	Leu	Pro	Pro	Glu	Leu	Ser	Arg	Val
					80				85			90		
Leu	Asn	Ala	Ser	Thr	Leu	Ala	Leu	Ala	Leu	Ala	Asn	Leu	Asn	Gly
					95				100			105		
Ser	Arg	Gln	Arg	Ser	Gly	Asp	Asn	Leu	Val	Cys	His	Ala	Arg	Asp
					110				115			120		
Gly	Ser	Ile	Leu	Ala	Gly	Ser	Cys	Leu	Tyr	Val	Gly	Leu	Pro	Pro
					125				130			135		
Glu	Lys	Pro	Val	Asn	Ile	Ser	Cys	Trp	Ser	Lys	Asn	Met	Lys	Asp
					140				145			150		
Leu	Thr	Cys	Arg	Trp	Thr	Pro	Gly	Ala	His	Gly	Glu	Thr	Phe	Leu
					155				160			165		
His	Thr	Asn	Tyr	Ser	Leu	Lys	Tyr	Lys	Leu	Arg	Trp	Tyr	Gly	Gln
					170				175			180		
Asp	Asn	Thr	Cys	Glu	Glu	Tyr	His	Thr	Val	Gly	Pro	His	Ser	Cys
					185				190			195		
His	Ile	Pro	Lys	Asp	Leu	Ala	Leu	Phe	Thr	Pro	Tyr	Glu	Ile	Trp
					200				205			210		
Val	Glu	Ala	Thr	Asn	Arg	Leu	Gly	Ser	Ala	Arg	Ser	Asp	Val	Leu
					215				220			225		
Thr	Leu	Asp	Ile	Leu	Asp	Val	Val	Thr	Thr	Asp	Pro	Pro	Pro	Asp
					230				235			240		
Val	His	Val	Ser	Arg	Val	Gly	Gly	Leu	Glu	Asp	Gln	Leu	Ser	Val
					245				250			255		
Arg	Trp	Val	Ser	Pro	Pro	Ala	Leu	Lys	Asp	Phe	Leu	Phe	Gln	Ala
					260				265			270		
Lys	Tyr	Gln	Ile	Arg	Tyr	Arg	Val	Glu	Asp	Ser	Val	Asp	Trp	Lys
					275				280			285		
Val	Val	Asp	Asp	Val	Ser	Asn	Gln	Thr	Ser	Cys	Arg	Leu	Ala	Gly
					290				295			300		
Leu	Lys	Pro	Gly	Thr	Val	Tyr	Phe	Val	Gln	Val	Arg	Cys	Asn	Pro
					305				310			315		
Phe	Gly	Ile	Tyr	Gly	Ser	Lys	Lys	Ala	Gly	Ile	Trp	Ser	Glu	Trp
					320				325			330		
Ser	His	Pro	Thr	Ala	Ala	Ser	Thr	Pro	Arg	Ser	Glu	Arg	Pro	Gly
					335				340			345		
Pro	Gly	Gly	Ala	Cys	Glu	Pro	Arg	Gly	Gly	Glu	Pro	Ser	Ser	

350 355 360

Gly Pro Val Arg Arg Glu Leu Lys Gln Phe Leu Gly Trp Leu Lys
365 370 375

Lys His Ala Tyr Cys Ser Asn Leu Ser Phe Arg Leu Tyr Asp Gln
380 385 390

Trp Arg Ala Trp Met Gln Lys Ser His Lys Thr Arg Asn Gln Asp
395 400 405

Glu Gly Ile Leu Pro Ser Gly Arg Arg Gly Thr Ala Arg Gly Pro
410 415 420

Ala Arg

<210> 33
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 33
cccgccccgac gtgcacgtga gcc 23

<210> 34
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 34
tgagccagcc caggaactgc ttg 23

<210> 35
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 35
caagtgcgtc gcaaccctt tggcatctat ggctccaaga aagccggat 50

<210> 36
<211> 1771
<212> DNA
<213> Homo Sapien

<400> 36
cccacgcgtc cgctggtgtt agatcgagca accctctaaa agcagtttag 50

agtggtaaaa aaaaaaaaaa acacacccaaa cgctcgacgc cacaaaagg 100
atgaaatttc ttctggacat cctcctgctt ctcccgttac tgatcgtctg 150
ctccctagag tccttcgtga agctttttat tcctaagagg agaaaatcag 200
tcaccggcga aatcgtgctg attacaggag ctgggcattgg aattgggaga 250
ctgactgcct atgaatttgc taaaacttaaa agcaagotgg ttctctggga 300
tataaataag catggactgg aggaaacagc tgccaaatgc aagggactgg 350
tgccaagggt tcatacctt gtggtagact gcagcaaccg agaagatatt 400
tacagctctg caaagaaggt gaaggcagaa attggagatg ttagtatttt 450
agtaaataat gctggtagtgc tctatacatc agatttgc tgcatacacaag 500
atcctcagat taaaagact tttgaagtta atgtacttgc acatttctgg 550
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gatgaactgg ctgccttaca aataactgga gtcaaaacaa catgtctgtg 750
tcctaaatttc gtaaacactg gttcatcaa aaatccaagt acaagttgg 800
gaccactct ggaacctgag gaagtggtaa acaggctgat gcatgggatt 850
ctgactgagc agaagatgat ttttattcca tcttctatag ctttttaac 900
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aaatcagtgt taagtttgc gcatgttgc gatataaaat gaaagcgaa 1000
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tacctttaga ggtgacttta agggaaatga agaaaaagaa cccaaatgac 1250
tttattaaaa taatttccaa gattattgt ggctcacctg aaggcttgc 1300
aaaatttgc ccataaccgt ttatccaata tatatttttta ttttgatttgc 1350
cacttaaatt ttgtataatt tgggtttctt tttctgttct acataaaatc 1400
agaaaacttca agctctctaa ataaaatgaa ggactatatac tagtggatt 1450
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gccactctgt ttcctgagag atacctcaca ttccaatgcc aaacatttct 1550
gcacaggaa gctagaggtg gatacacgtg ttgcaagtat aaaagcatca 1600
ctgggattta aggagaattg agagaatgt a cccacaaatg gcagcaataa 1650
taaatggatc acacttaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1700
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1750
aaaaaaaaaa aaaaaaaaaa a 1771

<210> 37
<211> 300
<212> PRT
<213> Homo Sapien

<400> 37
Met Lys Phe Leu Leu Asp Ile Leu Leu Leu Pro Leu Leu Ile
1 5 10 15
Val Cys Ser Leu Glu Ser Phe Val Lys Leu Phe Ile Pro Lys Arg
20 25 30
Arg Lys Ser Val Thr Gly Glu Ile Val Leu Ile Thr Gly Ala Gly
35 40 45
His Gly Ile Gly Arg Leu Thr Ala Tyr Glu Phe Ala Lys Leu Lys
50 55 60
Ser Lys Leu Val Leu Trp Asp Ile Asn Lys His Gly Leu Glu Glu
65 70 75
Thr Ala Ala Lys Cys Lys Gly Leu Gly Ala Lys Val His Thr Phe
80 85 90
Val Val Asp Cys Ser Asn Arg Glu Asp Ile Tyr Ser Ser Ala Lys
95 100 105
Lys Val Lys Ala Glu Ile Gly Asp Val Ser Ile Leu Val Asn Asn
110 115 120
Ala Gly Val Val Tyr Thr Ser Asp Leu Phe Ala Thr Gln Asp Pro
125 130 135
Gln Ile Glu Lys Thr Phe Glu Val Asn Val Leu Ala His Phe Trp
140 145 150
Thr Thr Lys Ala Phe Leu Pro Ala Met Thr Lys Asn Asn His Gly
155 160 165
His Ile Val Thr Val Ala Ser Ala Ala Gly His Val Ser Val Pro
170 175 180
Phe Leu Leu Ala Tyr Cys Ser Ser Lys Phe Ala Ala Val Gly Phe
185 190 195
His Lys Thr Leu Thr Asp Glu Leu Ala Ala Leu Gln Ile Thr Gly

200 205 210

Val Lys Thr Thr Cys Leu Cys Pro Asn Phe Val Asn Thr Gly Phe
215 220 225

Ile Lys Asn Pro Ser Thr Ser Leu Gly Pro Thr Leu Glu Pro Glu
230 235 240

Glu Val Val Asn Arg Leu Met His Gly Ile Leu Thr Glu Gln Lys
245 250 255

Met Ile Phe Ile Pro Ser Ser Ile Ala Phe Leu Thr Thr Leu Glu
260 265 270

Arg Ile Leu Pro Glu Arg Phe Leu Ala Val Leu Lys Arg Lys Ile
275 280 285

Ser Val Lys Phe Asp Ala Val Ile Gly Tyr Lys Met Lys Ala Gln
290 295 300

<210> 38

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 38

ggtaaggca gaaattggag atg 23

<210> 39

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 39

atccatgca tcagcctgtt tacc 24

<210> 40

<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 40

gctggtag tctatacatc agattttttt gctacacaag atccctcag 48

<210> 41

<211> 1377

<212> DNA

<213> Homo Sapien

<400> 41
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gaaccaggac tggggtgacg gcagggcagg gggcgctgg ccggggagaa 100
gcgccccccc tggagcacca ccaactggag ggtccggagt agcgagcgcc 150
ccgaaggagg ccatacgaaaa gcccggaggg gggactgcga gaggaccccg 200
gctccggggc tcccggtgcc agcgctatga ggccactcct cgtcctgctg 250
cttcctggcc tggcgcccg ctgcggggca ctggacgaca acaagatccc 300
cagcctctgc ccggggcacc ccggccttcc aggacacgcgg ggccaccatg 350
gcagccaggg cttgccgggc cgcgatggcc gcgacggccg cgacggcg 400
cccgggctc cgggagagaa aggcgagggc gggaggccgg gaotgcccgg 450
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ggccggcccc ttttctcaga gatcactcaa taaacctaag aaccctcata 1350
aaaaaaaaaaa aaaaaaaaaa aaaaaaaaa 1377

<210> 42

<211> 243
<212> PRT
<213> Homo Sapien

<400> 42
Met Arg Pro Leu Leu Val Leu Leu Leu Gly Leu Ala Ala Gly
1 5 10 15

Ser Pro Pro Leu Asp Asp Asn Lys Ile Pro Ser Leu Cys Pro Gly
20 25 30

His Pro Gly Leu Pro Gly Thr Pro Gly His His Gly Ser Gln Gly
35 40 45

Leu Pro Gly Arg Asp Gly Arg Asp Gly Arg Asp Gly Ala Pro Gly
50 55 60

Ala Pro Gly Glu Lys Gly Glu Gly Gly Arg Pro Gly Leu Pro Gly
65 70 75

Pro Arg Gly Asp Pro Gly Pro Arg Gly Glu Ala Gly Pro Ala Gly
80 85 90

Pro Thr Gly Pro Ala Gly Glu Cys Ser Val Pro Pro Arg Ser Ala
95 100 105

Phe Ser Ala Lys Arg Ser Glu Ser Arg Val Pro Pro Pro Ser Asp
110 115 120

Ala Pro Leu Pro Phe Asp Arg Val Leu Val Asn Glu Gln Gly His
125 130 135

Tyr Asp Ala Val Thr Gly Lys Phe Thr Cys Gln Val Pro Gly Val
140 145 150

Tyr Tyr Phe Ala Val His Ala Thr Val Tyr Arg Ala Ser Leu Gln
155 160 165

Phe Asp Leu Val Lys Asn Gly Glu Ser Ile Ala Ser Phe Phe Gln
170 175 180

Phe Phe Gly Gly Trp Pro Lys Pro Ala Ser Leu Ser Gly Gly Ala
185 190 195

Met Val Arg Leu Glu Pro Glu Asp Gln Val Trp Val Gln Val Gly
200 205 210

Val Gly Asp Tyr Ile Gly Ile Tyr Ala Ser Ile Lys Thr Asp Ser
215 220 225

Thr Phe Ser Gly Phe Leu Val Tyr Ser Asp Trp His Ser Ser Pro
230 235 240

Val Phe Ala

<210> 43
<211> 24

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 43
 tacaggccca gtcaggacca gggg 24

<210> 44
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 44
 agccagcctc gctctcg 18

<210> 45
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 45
 gtctgcgatc aggtctgg 18

<210> 46
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 46
 gaaagaggca atggattcgc 20

<210> 47
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 47
 gacttacact tgccagcaca gcac 24

<210> 48
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 48
ggagcaccac caactggagg gtccggagta gcgagcgccc cgaag 45

<210> 49
<211> 1876
<212> DNA
<213> Homo Sapien

<400> 49
ctctttgtc caccagccca gcctgactcc tggagattgt gaatagctcc 50
atccagcctg agaaacaaga cgggtggctg agccaggctg tgcacggagc 100
acctgacggg cccaacacagac ccattgtgc tccagagacc tccccctggcc 150
gggggcatact cctggctgtg ctccctggccc tccttggcac cacctggca 200
gaggtgtggc caccggcagct gcaggagcag gctccgatgg ccggagccct 250
gaacaggaag gagagttct tgccttcctc cctgcacaac cgccctgcgc 300
gctgggtcca gccccctgcg gctgacatgc ggaggctgga ctggagtgac 350
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tgcagctgct gccccgggc ttggcgctct ttgttgaagt ggtcagecta 500
tggtttgcag agggggcagcg gtacagccac gcggcaggag agtgtgtcg 550
caacgccacc tgcacccact acacgcagct cgtgtggcc acctcaagcc 600
agctgggctg tggcgac ctgtgtctg caggccagac agcgatagaa 650
gcctttgtct gtgcctactc ccccgaggc aactgggagg tcaacggaa 700
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gtgtctcagg ctgcttcaaa gcctgggacc atgcaggggg gctctgtgag 800
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gagtgtcgat gctgtgtga catcggtac gggggagccc agtgtgcccac 1000
caaggtgcattttcccttcc acacctgtga cctgaggatc gacggagact 1050
gcttcatgggt gtcttcagag gcagacacct attacagagc caggatgaaa 1100
tgtcagagga aaggcgggggt gctggccca gatcaagagcc agaaagtgc 1150

ggacatcctc gccttctatac tggcccgctt ggagaccacc aacgaggta 1200
ctgacagtga ctgcgagacc aggaacttctt ggatcggtctt caccataaag 1250
accgccaagg actccttcgg ctggccaca ggggagcacc aggccttcac 1300
cagtttgcc tttgggcagc ctgacaacca cgggctggtg tggctgagtg 1350
ctgccccatggg gtttggcaac tgctggagc tgctggcttc agctgccttc 1400
aacttggaaacg accagcgctg caaaacccga aaccgttaca tctgccatgtt 1450
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catggctccc tcgcctgccc tggagcacc ggctctgtt acctgtctgc 1550
ccacccgtctt ggaacaaggcc ccaggttaag accacatgcc tcattgtccaa 1600
agaggtctca gaccttgcac aatgccagaa gttggcaga gagaggcagg 1650
gaggccagtg agggccaggg agtgagtgtt agaagaagct gggcccttc 1700
gcctgctttt gattgggaag atgggcttca attagatggc gaaggagagg 1750
acaccggccag tggtccaaaa aggctgtctt cttccacctg gcccagaccc 1800
tgtggggcag cgagcttcc ctgtggcatg aaccccacgg ggtattaaat 1850
tatgaatcag ctgaaaaaaaaaaa 1876

<210> 50
<211> 455
<212> PRT
<213> Homo Sapien

<400> 50
Met Leu His Pro Glu Thr Ser Pro Gly Arg Gly His Leu Leu Ala
1 5 10 15
Val Leu Leu Ala Leu Leu Gly Thr Thr Trp Ala Glu Val Trp Pro
20 25 30
Pro Gln Leu Gln Glu Gln Ala Pro Met Ala Gly Ala Leu Asn Arg
35 40 45
Lys Glu Ser Phe Leu Leu Leu Ser Leu His Asn Arg Leu Arg Ser
50 55 60
Trp Val Gln Pro Pro Ala Ala Asp Met Arg Arg Leu Asp Trp Ser
65 70 75
Asp Ser Leu Ala Gln Leu Ala Gln Ala Arg Ala Ala Leu Cys Gly
80 85 90
Ile Pro Thr Pro Ser Leu Ala Ser Gly Leu Trp Arg Thr Leu Gln
95 100 105
Val Gly Trp Asn Met Gln Leu Leu Pro Ala Gly Leu Ala Ser Phe

110	115	120
Val Glu Val Val Ser Leu Trp Phe Ala Glu Gly Gln Arg Tyr Ser		
125	130	135
His Ala Ala Gly Glu Cys Ala Arg Asn Ala Thr Cys Thr His Tyr		
140	145	150
Thr Gln Leu Val Trp Ala Thr Ser Ser Gln Leu Gly Cys Gly Arg		
155	160	165
His Leu Cys Ser Ala Gly Gln Thr Ala Ile Glu Ala Phe Val Cys		
170	175	180
Ala Tyr Ser Pro Gly Gly Asn Trp Glu Val Asn Gly Lys Thr Ile		
185	190	195
Ile Pro Tyr Lys Lys Gly Ala Trp Cys Ser Leu Cys Thr Ala Ser		
200	205	210
Val Ser Gly Cys Phe Lys Ala Trp Asp His Ala Gly Gly Leu Cys		
215	220	225
Glu Val Pro Arg Asn Pro Cys Arg Met Ser Cys Gln Asn His Gly		
230	235	240
Arg Leu Asn Ile Ser Thr Cys His Cys His Cys Pro Pro Gly Tyr		
245	250	255
Thr Gly Arg Tyr Cys Gln Val Arg Cys Ser Leu Gln Cys Val His		
260	265	270
Gly Arg Phe Arg Glu Glu Glu Cys Ser Cys Val Cys Asp Ile Gly		
275	280	285
Tyr Gly Gly Ala Gln Cys Ala Thr Lys Val His Phe Pro Phe His		
290	295	300
Thr Cys Asp Leu Arg Ile Asp Gly Asp Cys Phe Met Val Ser Ser		
305	310	315
Glu Ala Asp Thr Tyr Tyr Arg Ala Arg Met Lys Cys Gln Arg Lys		
320	325	330
Gly Gly Val Leu Ala Gln Ile Lys Ser Gln Lys Val Gln Asp Ile		
335	340	345
Leu Ala Phe Tyr Leu Gly Arg Leu Glu Thr Thr Asn Glu Val Thr		
350	355	360
Asp Ser Asp Phe Glu Thr Arg Asn Phe Trp Ile Gly Leu Thr Tyr		
365	370	375
Lys Thr Ala Lys Asp Ser Phe Arg Trp Ala Thr Gly Glu His Gln		
380	385	390
Ala Phe Thr Ser Phe Ala Phe Gly Gln Pro Asp Asn His Gly Leu		
395	400	405

Val Trp Leu Ser Ala Ala Met Gly Phe Gly Asn Cys Val Glu Leu
410 415 420

Gln Ala Ser Ala Ala Phe Asn Trp Asn Asp Gln Arg Cys Lys Thr
425 430 435

Arg Asn Arg Tyr Ile Cys Gln Phe Ala Gln Glu His Ile Ser Arg
440 445 450

Trp Gly Pro Gly Ser
455

<210> 51

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 51

aggaacttct ggatcgggct cacc 24

<210> 52

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 52

gggtctgggc caggtggaaag agag 24

<210> 53

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 53

gc当地ggact cttcccgctg ggccacagg gaggaccagg cttc 45

<210> 54

<211> 2331

<212> DNA

<213> Homo Sapien

<400> 54

c当地gacgcgtg ggctgggcgc tgcaaagcgt gtcccgccgg gtccccgagc 50

gtcccgccgg ctcgccccgc catgctcctg ctgctggggc tgtgcctggg 100

gctgtccctg tgtgtggggc cgccaggaaga ggccagagc tggggccact 150

cttcggagca ggatggactc agggtcccga ggcaagtca gactgttgca 200

aggctgaaaa ccaaaccctt gatgacagaa ttctcagtga agtctaccat 250
cattcccg t atgccttca ctacggttc ctgcagaatg ctgaacagag 300
cttctgaaga ccaggacatt gagttccaga tgcagattcc agtgcagct 350
ttcatcacca acttcactat gcttatttgg aacaagggtgt atcagggcga 400
aattacagag agagaaaaga agagtggtga tagggtaaaa gagaaaagga 450
ataaaaaccac agaagaaaat ggagagaagg ggactgaaat attcagagct 500
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gtacaacaag ccaggattgc ccagaatgga attttggag acttttatcat 850
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ggtcggggag acgcacaccc tcaagatcct caacaacacc cgagaggccg 1350
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ggagctacct caccacaaag gagctgctga gtcctggct gcaaagtgac 1850
gatgaaccgg agaaggageg gctgcggcag cgggcccagg ccctggctgt 1900
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tccccacgcat ggtatggcctg gaggaggccc acggcatgtc ggctgccatg 2000
ggacccgaac cggtggtgca gagcgtgcga ggagctggca cgcagccagg 2050
acctttgctc aagaagccaa actccgtcaa aaaaaaaacaa aacaaaacaa 2100
aaaaaaagaca tgggagagat ggtgttttc ctctccacca cctggggata 2150
cgatgagaag atggccacct gcaagccagg aagacggccc tcaccagaca 2200
ccatgtctgc tggcacctt atcttgacc tcccagcctc cagaactgtg 2250
agaaataaat gtgttttgtt taagctaaaa aaaaaaaaaa aaaaaaaaaa 2300
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa a 2331

<210> 55
<211> 694
<212> PRT
<213> Homo Sapien

<400> 55
Met Leu Leu Leu Leu Gly Leu Cys Leu Gly Leu Ser Leu Cys Val
1 5 10 15
Gly Ser Gln Glu Glu Ala Gln Ser Trp Gly His Ser Ser Glu Gln
20 25 30
Asp Gly Leu Arg Val Pro Arg Gln Val Arg Leu Leu Gln Arg Leu
35 40 45
Lys Thr Lys Pro Leu Met Thr Glu Phe Ser Val Lys Ser Thr Ile
50 55 60
Ile Ser Arg Tyr Ala Phe Thr Thr Val Ser Cys Arg Met Leu Asn
65 70 75
Arg Ala Ser Glu Asp Gln Asp Ile Glu Phe Gln Met Gln Ile Pro
80 85 90
Ala Ala Ala Phe Ile Thr Asn Phe Thr Met Leu Ile Gly Asp Lys
95 100 105
Val Tyr Gln Gly Glu Ile Thr Glu Arg Glu Lys Lys Ser Gly Asp
110 115 120

Arg Val Lys Glu Lys Arg Asn Lys Thr Thr Glu Glu Asn Gly Glu
 125 130 135
 Lys Gly Thr Glu Ile Phe Arg Ala Ser Ala Val Ile Pro Ser Lys
 140 145 150
 Asp Lys Ala Ala Phe Phe Leu Ser Tyr Glu Glu Leu Leu Gln Arg
 155 160 165
 Arg Leu Gly Lys Tyr Glu His Ser Ile Ser Val Arg Pro Gln Gln
 170 175 180
 Leu Ser Gly Arg Leu Ser Val Asp Val Asn Ile Leu Glu Ser Ala
 185 190 195
 Gly Ile Ala Ser Leu Glu Val Leu Pro Leu His Asn Ser Arg Gln
 200 205 210
 Arg Gly Ser Gly Arg Gly Glu Asp Asp Ser Gly Pro Pro Pro Ser
 215 220 225
 Thr Val Ile Asn Gln Asn Glu Thr Phe Ala Asn Ile Ile Phe Lys
 230 235 240
 Pro Thr Val Val Gln Gln Ala Arg Ile Ala Gln Asn Gly Ile Leu
 245 250 255
 Gly Asp Phe Ile Ile Arg Tyr Asp Val Asn Arg Glu Gln Ser Ile
 260 265 270
 Gly Asp Ile Gln Val Leu Asn Gly Tyr Phe Val His Tyr Phe Ala
 275 280 285
 Pro Lys Asp Leu Pro Pro Leu Pro Lys Asn Val Val Phe Val Leu
 290 295 300
 Asp Ser Ser Ala Ser Met Val Gly Thr Lys Leu Arg Gln Thr Lys
 305 310 315
 Asp Ala Leu Phe Thr Ile Leu His Asp Leu Arg Pro Gln Asp Arg
 320 325 330
 Phe Ser Ile Ile Gly Phe Ser Asn Arg Ile Lys Val Trp Lys Asp
 335 340 345
 His Leu Ile Ser Val Thr Pro Asp Ser Ile Arg Asp Gly Lys Val
 350 355 360
 Tyr Ile His His Met Ser Pro Thr Gly Gly Thr Asp Ile Asn Gly
 365 370 375
 Ala Leu Gln Arg Ala Ile Arg Leu Leu Asn Lys Tyr Val Ala His
 380 385 390
 Ser Gly Ile Gly Asp Arg Ser Val Ser Leu Ile Val Phe Leu Thr
 395 400 405
 Asp Gly Lys Pro Thr Val Gly Glu Thr His Thr Leu Lys Ile Leu

410	415	420
Asn Asn Thr Arg Glu Ala Ala Arg Gly Gln Val Cys Ile Phe Thr		
425	430	435
Ile Gly Ile Gly Asn Asp Val Asp Phe Arg Leu Leu Glu Lys Leu		
440	445	450
Ser Leu Glu Asn Cys Gly Leu Thr Arg Arg Val His Glu Glu Glu		
455	460	465
Asp Ala Gly Ser Gln Leu Ile Gly Phe Tyr Asp Glu Ile Arg Thr		
470	475	480
Pro Leu Leu Ser Asp Ile Arg Ile Asp Tyr Pro Pro Ser Ser Val		
485	490	495
Val Gln Ala Thr Lys Thr Leu Phe Pro Asn Tyr Phe Asn Gly Ser		
500	505	510
Glu Ile Ile Ile Ala Gly Lys Leu Val Asp Arg Lys Leu Asp His		
515	520	525
Leu His Val Glu Val Thr Ala Ser Asn Ser Lys Lys Phe Ile Ile		
530	535	540
Leu Lys Thr Asp Val Pro Val Arg Pro Gln Lys Ala Gly Lys Asp		
545	550	555
Val Thr Gly Ser Pro Arg Pro Gly Gly Asp Gly Glu Gly Asp Thr		
560	565	570
Asn His Ile Glu Arg Leu Trp Ser Tyr Leu Thr Thr Lys Glu Leu		
575	580	585
Leu Ser Ser Trp Leu Gln Ser Asp Asp Glu Pro Glu Lys Glu Arg		
590	595	600
Leu Arg Gln Arg Ala Gln Ala Leu Ala Val Ser Tyr Arg Phe Leu		
605	610	615
Thr Pro Phe Thr Ser Met Lys Leu Arg Gly Pro Val Pro Arg Met		
620	625	630
Asp Gly Leu Glu Glu Ala His Gly Met Ser Ala Ala Met Gly Pro		
635	640	645
Glu Pro Val Val Gln Ser Val Arg Gly Ala Gly Thr Gln Pro Gly		
650	655	660
Pro Leu Leu Lys Lys Pro Asn Ser Val Lys Lys Lys Gln Asn Lys		
665	670	675
Thr Lys Lys Arg His Gly Arg Asp Gly Val Phe Pro Leu His His		
680	685	690
Leu Gly Ile Arg		

<210> 56
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 56
gtgggaacca aactccggca gacc 24

<210> 57
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 57
cacatcgagc gtctctgg 18

<210> 58
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 58
agccgctcct tctccggttc atcg 24

<210> 59
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 59
tggaaggacc acttgatatac agtcactcca gacagcatca gggatggg 48

<210> 60
<211> 1413
<212> DNA
<213> Homo Sapien

<400> 60
cggacgcgtg ggggcccgaa catggcgagt gtatgtctgc cgagcggatc 50
ccagtggtgcg gccccgggg cggggggggc gcctcccccggg ctccgggttc 100
tgctgttgct cttctccgcc gccccactga tccccacagg tgatgggcag 150
aatctgttta cgaaagacgt gacagtgtac gagggagagg ttgcgaccat 200

cagttgccaa gtcaataaga gtgacgactc tgtgatttag ctactgaatc 250
ccaacaggca gaccatttat ttcagggact tcagggcttt gaaggacagc 300
aggtttcaatgt tgctgaattt ttcttagcagt gaactcaaag tatcattgac 350
aacacgtctca atttctgatg aaggaagata ctttgccag ctctataccg 400
atcccccaaca ggaaagttac accaccatca cagtccttgtt cccaccacgt 450
aatctgatga tcgatatacca gaaagacact gcgggttgaag gtgaggagat 500
tgaagtcaac tgcactgcta tggccagcaa gccagccacg actatcaggt 550
ggttcaaaagg gaacacagag ctaaaaaggca aatcgaggtt ggaagagtgg 600
tcagacatgt acactgtgac cagtcagctg atgctgaagg tgcacaagga 650
ggacgatggg gtcccagtga tctgccaggt ggagcacccct gcggtcactg 700
gaaacctgca gacccagcgg tatctagaag tacagtataa gcctcaagtg 750
cacattcaga tgacttatcc tctacaaggc ttaaccggg aaggggacgc 800
gcttgagttt acatgtgaag ccateggaa gccccagccct gtgatggtaa 850
cttgggtgag agtcgatgtat gaaatgcctc aacacgcccgt actgtctggg 900
cccaacctgt tcatcaataa cctaaacaaa acagataatg gtacataccg 950
ctgtgaagct tcaaacatag tggggaaagc tcactcgat tatatgctgt 1000
atgtatacga tccccccaca actatccctc ctcccacaac aaccaccacc 1050
accaccacca ccaccaccac caccatcctt accatcatca cagattcccg 1100
agcaggtgaa gaaggctcga tcagggcagt ggatcatgcc gtgatcggtg 1150
gcgtcgtggc ggtgggtggc ttgcctatgc tgtgcttgc catcattctg 1200
ggcgctatt ttgccagaca taaaggtaca tacttcactc atgaagccaa 1250
aggagccgat gacgcagcag acgcagacac agctataatc aatgcagaag 1300
gaggacagaa caactccgaa gaaaagaaaag agtacttcat ctagatcago 1350
ctttttgttt caatgaggtg tccaaactggc cctattttaga tgataaagag 1400
acagtgtat tgg 1413

<210> 61
<211> 440
<212> PRT
<213> Homo Sapien

<400> 61
Met Ala Ser Val Val Leu Pro Ser Gly Ser Gln Cys Ala Ala Ala
1 5 10 15

Ala Ala Ala Ala Ala Pro Pro Gly Leu Arg Leu Leu Leu Leu
 20 25 30
 Phe Ser Ala Ala Ala Leu Ile Pro Thr Gly Asp Gly Gln Asn Leu
 35 40 45
 Phe Thr Lys Asp Val Thr Val Ile Glu Gly Glu Val Ala Thr Ile
 50 55 60
 Ser Cys Gln Val Asn Lys Ser Asp Asp Ser Val Ile Gln Leu Leu
 65 70 75
 Asn Pro Asn Arg Gln Thr Ile Tyr Phe Arg Asp Phe Arg Pro Leu
 80 85 90
 Lys Asp Ser Arg Phe Gln Leu Leu Asn Phe Ser Ser Ser Glu Leu
 95 100 105
 Lys Val Ser Leu Thr Asn Val Ser Ile Ser Asp Glu Gly Arg Tyr
 110 115 120
 Phe Cys Gln Leu Tyr Thr Asp Pro Pro Gln Glu Ser Tyr Thr Thr
 125 130 135
 Ile Thr Val Leu Val Pro Pro Arg Asn Leu Met Ile Asp Ile Gln
 140 145 150
 Lys Asp Thr Ala Val Glu Gly Glu Glu Ile Glu Val Asn Cys Thr
 155 160 165
 Ala Met Ala Ser Lys Pro Ala Thr Thr Ile Arg Trp Phe Lys Gly
 170 175 180
 Asn Thr Glu Leu Lys Gly Lys Ser Glu Val Glu Glu Trp Ser Asp
 185 190 195
 Met Tyr Thr Val Thr Ser Gln Leu Met Leu Lys Val His Lys Glu
 200 205 210
 Asp Asp Gly Val Pro Val Ile Cys Gln Val Glu His Pro Ala Val
 215 220 225
 Thr Gly Asn Leu Gln Thr Gln Arg Tyr Leu Glu Val Gln Tyr Lys
 230 235 240
 Pro Gln Val His Ile Gln Met Thr Tyr Pro Leu Gln Gly Leu Thr
 245 250 255
 Arg Glu Gly Asp Ala Leu Glu Leu Thr Cys Glu Ala Ile Gly Lys
 260 265 270
 Pro Gln Pro Val Met Val Thr Trp Val Arg Val Asp Asp Glu Met
 275 280 285
 Pro Gln His Ala Val Leu Ser Gly Pro Asn Leu Phe Ile Asn Asn
 290 295 300
 Leu Asn Lys Thr Asp Asn Gly Thr Tyr Arg Cys Glu Ala Ser Asn

305	310	315
Ile Val Gly Lys Ala His Ser Asp Tyr Met Leu Tyr Val Tyr Asp		
320	325	330
Pro Pro Thr Thr Ile Pro Pro Pro Thr Thr Thr Thr Thr Thr Thr		
335	340	345
Thr Thr Thr Thr Thr Ile Leu Thr Ile Ile Thr Asp Ser Arg		
350	355	360
Ala Gly Glu Glu Gly Ser Ile Arg Ala Val Asp His Ala Val Ile		
365	370	375
Gly Gly Val Val Ala Val Val Val Phe Ala Met Leu Cys Leu Leu		
380	385	390
Ile Ile Leu Gly Arg Tyr Phe Ala Arg His Lys Gly Thr Tyr Phe		
395	400	405
Thr His Glu Ala Lys Gly Ala Asp Asp Ala Ala Asp Ala Asp Thr		
410	415	420
Ala Ile Ile Asn Ala Glu Gly Gly Gln Asn Asn Ser Glu Glu Lys		
425	430	435
Lys Glu Tyr Phe Ile		
440		
<210> 62		
<211> 24		
<212> DNA		
<213> Artificial Sequence		
<220>		
<223> Synthetic oligonucleotide probe		
<400> 62		
ggcttctgct gttgctcttc tccg 24		
<210> 63		
<211> 20		
<212> DNA		
<213> Artificial Sequence		
<220>		
<223> Synthetic oligonucleotide probe		
<400> 63		
gtacactgtg accagtcagc 20		
<210> 64		
<211> 20		
<212> DNA		
<213> Artificial Sequence		
<220>		
<223> Synthetic oligonucleotide probe		

<400> 64
atcatcacag attcccgagc 20

<210> 65
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 65
ttcaatctcc tcaccttcca ccgc 24

<210> 66
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 66
atagctgtgt ctgcgtctgc tgcg 24

<210> 67
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 67
cgcggcaactg atccccacag gtgatggca gaatctgttt acgaaagacg 50

<210> 68
<211> 2555
<212> DNA
<213> Homo Sapien

<400> 68
ggggcggtg gacgcggact cgaacgcagt tgcttcggga cccaggaccc 50
cctcggggccc gacccgcacag gaaagactga ggccgcggcc tgccccgccc 100
ggctccctgc gccgcgcgcg cctcccgga cagaagatgt gctccaggg 150
ccctctgtgc ctgcgcgtgc tccctgtact ggccctgggg cctgggggtgc 200
agggctgccc atccggctgc cagtgccagcc agccacacac agtcttctgc 250
actgccccgc acgggaccac ggtgccccga gacgtgccac cccacacgg 300
ggggctgtac gtcttgaga acggcatcac catgctcgac gcaaggagct 350
ttgcggcct gccgggcctg cagtcctgg acctgtcaca gaaccagatc 400

gccagcctgc gcctgccccg cctgtgtctg ctggacctca gccacaacag 450
cctcctggcc ctggagccccg gcaccccttga cactgccaac gtggaggcgc 500
tgcggtggc tggctctgggg ctgcagcagc tggacgaggg gctttcagc 550
cgcttgcgca acctccacga cctggatgtg tccgacaacc agctggagcg 600
agtgccaccc gtatcccgag gcctccgggg cctgacgcgc ctgcggctgg 650
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gctgccctgc aggagcttgg atgtgagcaac ctaaggctgc aggccctgcc 750
tggcgaccc tcgggccttc tccccccctt gggctgtgt gcagctgccc 800
gcaaccctt caactgcgtg tgccccctga gctggtttgg cccctgggtg 850
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caccgactgt agggcctgtc ccccaaaaaa aggactgccc accgtccacc 1150
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gcgggtctga gtgtgagggtg ccactcatgg gtttcccagg gcctggcctc 1900
cagtcaccccc tccacgcaaa gccctacatc taagccagag agagacaggg 1950
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gaaagagcag agggagagcg ggtaggcggc tgtgtgactc tagtcttggc 2350
cccaggaagc gaaggaacaa aagaaactgg aaaggaagat gctttaggaa 2400
catgtttgc tttttaaaa tatatatata tttataagag atccttccc 2450
atttattctg ggaagatgtt tttcaaactc agagacaagg actttggttt 2500
ttgtaagaca aacgatgata tgaaggcctt ttgtaagaaa aaataaaaaaa 2550
aaaaaa 2555

<210> 69
<211> 598
<212> PRT
<213> Homo Sapien

<400> 69
Met Cys Ser Arg Val Pro Leu Leu Leu Pro Leu Leu Leu Leu
1 5 10 15
Ala Leu Gly Pro Gly Val Gln Gly Cys Pro Ser Gly Cys Gln Cys
20 25 30
Ser Gln Pro Gln Thr Val Phe Cys Thr Ala Arg Gln Gly Thr Thr
35 40 45
Val Pro Arg Asp Val Pro Pro Asp Thr Val Gly Leu Tyr Val Phe
50 55 60
Glu Asn Gly Ile Thr Met Leu Asp Ala Ser Ser Phe Ala Gly Leu
65 70 75
Pro Gly Leu Gln Leu Leu Asp Leu Ser Gln Asn Gln Ile Ala Ser
80 85 90
Leu Arg Leu Pro Arg Leu Leu Leu Asp Leu Ser His Asn Ser
95 100 105
Leu Leu Ala Leu Glu Pro Gly Ile Leu Asp Thr Ala Asn Val Glu

110	115	120
Ala Leu Arg Leu Ala Gly Leu Gly	Gln Gln Leu Asp Glu	Gly
125	130	135
Leu Phe Ser Arg Leu Arg Asn Leu His	Asp Leu Asp Val Ser	Asp
140	145	150
Asn Gln Leu Glu Arg Val Pro Pro Val	Ile Arg Gly Leu Arg	Gly
155	160	165
Leu Thr Arg Leu Arg Leu Ala Gly Asn	Thr Arg Ile Ala Gln	Leu
170	175	180
Arg Pro Glu Asp Leu Ala Gly Leu Ala	Leu Gln Glu Leu Asp	
185	190	195
Val Ser Asn Leu Ser Leu Gln Ala	Leu Pro Gly Asp Leu Ser	Gly
200	205	210
Leu Phe Pro Arg Leu Arg Leu Leu Ala	Ala Ala Arg Asn Pro	Phe
215	220	225
Asn Cys Val Cys Pro Leu Ser Trp	Phe Gly Pro Trp Val Arg	Glu
230	235	240
Ser His Val Thr Leu Ala Ser Pro	Glu Glu Thr Arg Cys His	Phe
245	250	255
Pro Pro Lys Asn Ala Gly Arg Leu	Leu Leu Glu Leu Asp Tyr	Ala
260	265	270
Asp Phe Gly Cys Pro Ala Thr Thr	Thr Ala Thr Val Pro	Thr
275	280	285
Thr Arg Pro Val Val Arg Glu Pro	Thr Ala Leu Ser Ser	Ser Leu
290	295	300
Ala Pro Thr Trp Leu Ser Pro Thr	Ala Pro Ala Thr Glu	Ala Pro
305	310	315
Ser Pro Pro Ser Thr Ala Pro Pro	Thr Val Gly Pro Val	Pro Gln
320	325	330
Pro Gln Asp Cys Pro Pro Ser Thr	Cys Leu Asn Gly Gly	Thr Cys
335	340	345
His Leu Gly Thr Arg His His Leu	Ala Cys Leu Cys Pro	Glu Gly
350	355	360
Phe Thr Gly Leu Tyr Cys Glu Ser	Gln Met Gly Gln Gly	Thr Arg
365	370	375
Pro Ser Pro Thr Pro Val Thr Pro	Arg Pro Pro Arg Ser	Leu Thr
380	385	390
Leu Gly Ile Glu Pro Val Ser Pro	Thr Ser Leu Arg Val	Gly Leu
395	400	405

Gln Arg Tyr Leu Gln Gly Ser Ser Val Gln Leu Arg Ser Leu Arg
 410 415 420
 Leu Thr Tyr Arg Asn Leu Ser Gly Pro Asp Lys Arg Leu Val Thr
 425 430 435
 Leu Arg Leu Pro Ala Ser Leu Ala Glu Tyr Thr Val Thr Gln Leu
 440 445 450
 Arg Pro Asn Ala Thr Tyr Ser Val Cys Val Met Pro Leu Gly Pro
 455 460 465
 Gly Arg Val Pro Glu Gly Glu Glu Ala Cys Gly Glu Ala His Thr
 470 475 480
 Pro Pro Ala Val His Ser Asn His Ala Pro Val Thr Gln Ala Arg
 485 490 495
 Glu Gly Asn Leu Pro Leu Leu Ile Ala Pro Ala Leu Ala Ala Val
 500 505 510
 Leu Leu Ala Ala Leu Ala Ala Val Gly Ala Ala Tyr Cys Val Arg
 515 520 525
 Arg Gly Arg Ala Met Ala Ala Ala Ala Gln Asp Lys Gly Gln Val
 530 535 540
 Gly Pro Gly Ala Gly Pro Leu Glu Leu Glu Gly Val Lys Val Pro
 545 550 555
 Leu Glu Pro Gly Pro Lys Ala Thr Glu Gly Gly Glu Ala Leu
 560 565 570
 Pro Ser Gly Ser Glu Cys Glu Val Pro Leu Met Gly Phe Pro Gly
 575 580 585
 Pro Gly Leu Gln Ser Pro Leu His Ala Lys Pro Tyr Ile
 590 595

 <210> 70
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 70
 ccctccactg cccccaccgac tg 22

 <210> 71
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

<400> 71
cggttctggg gacgttaggg ctcg 24

<210> 72
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 72
ctgcccaccc tccacacctgc tcaat 25

<210> 73
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 73
aggactgccc accgtccacc tgccctcaatg ggggcacatg ccacc 45

<210> 74
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 74
acgcaaagcc ctacatctaa gccagagaga gacagggcag ctggg 45

<210> 75
<211> 1077
<212> DNA
<213> Homo Sapien

<400> 75
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ggcctccagg caacatgggg ggcccagtca gagagccggc actctcagg 200
gccctctggc tgagttgggg ggcagctctg ggggcctgtgg cttgtgccat 250
ggctctgctg acccaacaaa cagagctgca gagcctcagg agagaggtga 300
gcccggctgca gggcacagga ggcccctccc agaatgggaa agggtatccc 350
tggcagagtc tccccggagca gagttccgat gccccttggaaag cctggggagaa 400

tggggagaga tcccgaaaaa ggagagcagt gtcacccaa aaacagaaga 450
 agcagcactc tgtcctgcac ctggttccca ttaacgccac ctccaaggat 500
 gactccgatg tgacagaggt gatgtggcaa ccagcttta ggctgggag 550
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 ccagggtgaaa tacatactgg agacagccaa gagctgagta tataaaggag 950
 agggaatgtg caggaacaga ggcatttcc tgggttggc tccccgttcc 1000
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 cttgcttctg ttccccatgg agctccg 1077

<210> 76
 <211> 250
 <212> PRT
 <213> Homo Sapien

<400> 76 Met Pro Ala Ser Ser Pro Phe Leu Leu Ala Pro Lys Gly Pro Pro 1 5 10 15
Gly Asn Met Gly Gly Pro Val Arg Glu Pro Ala Leu Ser Val Ala 20 25 30
Leu Trp Leu Ser Trp Gly Ala Ala Leu Gly Ala Val Ala Cys Ala 35 40 45
Met Ala Leu Leu Thr Gln Gln Thr Glu Leu Gln Ser Leu Arg Arg 50 55 60
Glu Val Ser Arg Leu Gln Gly Thr Gly Gly Pro Ser Gln Asn Gly 65 70 75
Glu Gly Tyr Pro Trp Gln Ser Leu Pro Glu Gln Ser Ser Asp Ala 80 85 90
Leu Glu Ala Trp Glu Asn Gly Glu Arg Ser Arg Lys Arg Arg Ala 95 100 105
Val Leu Thr Gln Lys Gln Lys Lys Gln His Ser Val Leu His Leu 110 115 120

Val	Pro	Ile	Asn	Ala	Thr	Ser	Lys	Asp	Asp	Ser	Asp	Val	Thr	Glu
125								130						135
Val	Met	Trp	Gln	Pro	Ala	Leu	Arg	Arg	Gly	Arg	Gly	Leu	Gln	Ala
140							145							150
Gln	Gly	Tyr	Gly	Val	Arg	Ile	Gln	Asp	Ala	Gly	Val	Tyr	Leu	Leu
155							160							165
Tyr	Ser	Gln	Val	Leu	Phe	Gln	Asp	Val	Thr	Phe	Thr	Met	Gly	Gln
170							175							180
Val	Val	Ser	Arg	Glu	Gly	Gln	Gly	Arg	Gln	Glu	Thr	Leu	Phe	Arg
185							190							195
Cys	Ile	Arg	Ser	Met	Pro	Ser	His	Pro	Asp	Arg	Ala	Tyr	Asn	Ser
200							205							210
Cys	Tyr	Ser	Ala	Gly	Val	Phe	His	Leu	His	Gln	Gly	Asp	Ile	Leu
215							220							225
Ser	Val	Ile	Ile	Pro	Arg	Ala	Arg	Ala	Lys	Leu	Asn	Leu	Ser	Pro
230							235							240
His	Gly	Thr	Phe	Leu	Gly	Phe	Val	Lys	Leu					
245							250							

<210> 77
 <211> 2849
 <212> DNA
 <213> Homo Sapien

<400> 77
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 tgccgtcctc cggaagacct tttccccctgc tctgtttct tcaccgagtc 200
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 gaacacgcagg agtgggaggg gactgaggag ctgccgtcgc ctccggacca 450
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<210> 78

<211> 281

<212> PRT

<213> Homo Sapien

<400> 78

Met Gly Ser Arg Gly Gln Gly Leu Leu Leu Ala Tyr Cys Leu Leu
1 5 10 15

Leu Ala Phe Ala Ser Gly Leu Val Leu Ser Arg Val Pro His Val
20 25 30

Gln Gly Glu Gln Gln Glu Trp Glu Gly Thr Glu Glu Leu Pro Ser
35 40 45

Pro Pro Asp His Ala Glu Arg Ala Glu Glu Gln His Glu Lys Tyr
50 55 60

Arg Pro Ser Gln Asp Gln Gly Leu Pro Ala Ser Arg Cys Leu Arg
65 70 75

Cys Cys Asp Pro Gly Thr Ser Met Tyr Pro Ala Thr Ala Val Pro
80 85 90

Gln Ile Asn Ile Thr Ile Leu Lys Gly Glu Lys Gly Asp Arg Gly
95 100 105

Asp Arg Gly Leu Gln Gly Lys Tyr Gly Lys Thr Gly Ser Ala Gly

110	115	120
Ala Arg Gly His Thr Gly Pro Lys Gly Gln Lys Gly Ser Met Gly		
125	130	135
Ala Pro Gly Glu Arg Cys Lys Ser His Tyr Ala Ala Phe Ser Val		
140	145	150
Gly Arg Lys Lys Pro Met His Ser Asn His Tyr Tyr Gln Thr Val		
155	160	165
Ile Phe Asp Thr Glu Phe Val Asn Leu Tyr Asp His Phe Asn Met		
170	175	180
Phe Thr Gly Lys Phe Tyr Cys Tyr Val Pro Gly Leu Tyr Phe Phe		
185	190	195
Ser Leu Asn Val His Thr Trp Asn Gln Lys Glu Thr Tyr Leu His		
200	205	210
Ile Met Lys Asn Glu Glu Val Val Ile Leu Phe Ala Gln Val		
215	220	225
Gly Asp Arg Ser Ile Met Gln Ser Gln Ser Leu Met Leu Glu Leu		
230	235	240
Arg Glu Gln Asp Gln Val Trp Val Arg Leu Tyr Lys Gly Glu Arg		
245	250	255
Glu Asn Ala Ile Phe Ser Glu Glu Leu Asp Thr Tyr Ile Thr Phe		
260	265	270
Ser Gly Tyr Leu Val Lys His Ala Thr Glu Pro		
275	280	
<210> 79		
<211> 24		
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<223> Synthetic oligonucleotide probe		
<400> 79		
tacaggccca gtcaggacca gggg 24		
<210> 80		
<211> 24		
<212> DNA		
<213> Artificial Sequence		
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<223> Synthetic oligonucleotide probe		
<400> 80		
ctgaagaagt agaggccggg cacg 24		
<210> 81		

<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 81
cccggtgctt gcgctgctgt gaccccgta cctccatgta cccgg 45

<210> 82
<211> 2284
<212> DNA
<213> Homo Sapien

<400> 82
gcggagcatc cgctgcggtc ctgcggaga ccccccgcgcg gattgcggg 50
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cttcttaaag caaactaaga ccagagggag gattatcctt gacccttcaa 200
gaccaaaaact aaactgaaat ttaaaaatgtt cttcggggaa gaaggagct 250
tgacttacac tttggtaata atttgcttcc tgacactaag gctgtctgct 300
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tatgcaaAGA aacaggTTAG gacatctagg ttccaattca ttcacattct 2150
tggttccaga taaaatcaac tgTTTATATC aatttctaAt ggatttgctt 2200
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aattaaatat ttgaataAAAt ctTTTGTtAC tcaa 2284

<210> 83
<211> 431
<212> PRT
<213> Homo Sapien

<400> 83
Met Phe Phe Gly Gly Glu Gly Ser Leu Thr Tyr Thr Leu Val Ile
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Ile Cys Phe Leu Thr Leu Arg Leu Ser Ala Ser Gln Asn Cys Leu
 20 25 30
 Lys Lys Ser Leu Glu Asp Val Val Ile Asp Ile Gln Ser Ser Leu
 35 40 45
 Ser Lys Gly Ile Arg Gly Asn Glu Pro Val Tyr Thr Ser Thr Gln
 50 55 60
 Glu Asp Cys Ile Asn Ser Cys Cys Ser Thr Lys Asn Ile Ser Gly
 65 70 75
 Asp Lys Ala Cys Asn Leu Met Ile Phe Asp Thr Arg Lys Thr Ala
 80 85 90
 Arg Gln Pro Asn Cys Tyr Leu Phe Phe Cys Pro Asn Glu Glu Ala
 95 100 105
 Cys Pro Leu Lys Pro Ala Lys Gly Leu Met Ser Tyr Arg Ile Ile
 110 115 120
 Thr Asp Phe Pro Ser Leu Thr Arg Asn Leu Pro Ser Gln Glu Leu
 125 130 135
 Pro Gln Glu Asp Ser Leu Leu His Gly Gln Phe Ser Gln Ala Val
 140 145 150
 Thr Pro Leu Ala His His His Thr Asp Tyr Ser Lys Pro Thr Asp
 155 160 165
 Ile Ser Trp Arg Asp Thr Leu Ser Gln Lys Phe Gly Ser Ser Asp
 170 175 180
 His Leu Glu Lys Leu Phe Lys Met Asp Glu Ala Ser Ala Gln Leu
 185 190 195
 Leu Ala Tyr Lys Glu Lys Gly His Ser Gln Ser Ser Gln Phe Ser
 200 205 210
 Ser Asp Gln Glu Ile Ala His Leu Leu Pro Glu Asn Val Ser Ala
 215 220 225
 Leu Pro Ala Thr Val Ala Val Ala Ser Pro His Thr Thr Ser Ala
 230 235 240
 Thr Pro Lys Pro Ala Thr Leu Leu Pro Thr Asn Ala Ser Val Thr
 245 250 255
 Pro Ser Gly Thr Ser Gln Pro Gln Leu Ala Thr Thr Ala Pro Pro
 260 265 270
 Val Thr Thr Val Thr Ser Gln Pro Pro Thr Thr Leu Ile Ser Thr
 275 280 285
 Val Phe Thr Arg Ala Ala Ala Thr Leu Gln Ala Met Ala Thr Thr
 290 295 300
 Ala Val Leu Thr Thr Phe Gln Ala Pro Thr Asp Ser Lys Gly

305 310 315

Ser Leu Glu Thr Ile Pro Phe Thr Glu Ile Ser Asn Leu Thr Leu
320 325 330

Asn Thr Gly Asn Val Tyr Asn Pro Thr Ala Leu Ser Met Ser Asn
335 340 345

Val Glu Ser Ser Thr Met Asn Lys Thr Ala Ser Trp Glu Gly Arg
350 355 360

Glu Ala Ser Pro Gly Ser Ser Ser Gln Gly Ser Val Pro Glu Asn
365 370 375

Gln Tyr Gly Leu Pro Phe Glu Lys Trp Leu Leu Ile Gly Ser Leu
380 385 390

Leu Phe Gly Val Leu Phe Leu Val Ile Gly Leu Val Leu Leu Gly
395 400 405

Arg Ile Leu Ser Glu Ser Leu Arg Arg Lys Arg Tyr Ser Arg Leu
410 415 420

Asp Tyr Leu Ile Asn Gly Ile Tyr Val Asp Ile
425 430

<210> 84
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 84
agggaggatt atccttgacc tttgaagacc 30

<210> 85
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 85
gaagcaagtg cccagctc 18

<210> 86
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 86
cgggtccctg ctctttgg 18

<210> 87
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 87
caccgttagct gggagcgcac tcac 24

<210> 88
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 88
agtgttaagtc aagctccc 18

<210> 89
<211> 49
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 89
gcttcctgac actaaggctg tctgctagtc agaattgcct caaaaagag 49

<210> 90
<211> 957
<212> DNA
<213> Homo Sapien

<400> 90
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ctagttgtat caaatcttgg tacgcagttat ttttatacca gtatTTTATG 900
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aaaaaaa 957

<210> 91

<211> 235

<212> PRT

<213> Homo Sapien

<400> 91

Met Arg Pro Leu Ala Gly Gly Leu Leu Lys Val Val Phe Val Val
1 5 10 15

Phe Ala Ser Leu Cys Ala Trp Tyr Ser Gly Tyr Leu Leu Ala Glu
20 25 30

Leu Ile Pro Asp Ala Pro Leu Ser Ser Ala Ala Tyr Ser Ile Arg
35 40 45

Ser Ile Gly Glu Arg Pro Val Leu Lys Ala Pro Val Pro Lys Arg
50 55 60

Gln Lys Cys Asp His Trp Thr Pro Cys Pro Ser Asp Thr Tyr Ala
65 70 75

Tyr Arg Leu Leu Ser Gly Gly Arg Ser Lys Tyr Ala Lys Ile
80 85 90

Cys Phe Glu Asp Asn Leu Leu Met Gly Glu Gln Leu Gly Asn Val
95 100 105

Ala Arg Gly Ile Asn Ile Ala Ile Val Asn Tyr Val Thr Gly Asn
110 115 120

Val Thr Ala Thr Arg Cys Phe Asp Met Tyr Glu Gly Asp Asn Ser
125 130 135

Gly Pro Met Thr Lys Phe Ile Gln Ser Ala Ala Pro Lys Ser Leu
140 145 150

Leu Phe Met Val Thr Tyr Asp Asp Gly Ser Thr Arg Leu Asn Asn
155 160 165

Asp Ala Lys Asn Ala Ile Glu Ala Leu Gly Ser Lys Glu Ile Arg
170 175 180

Asn Met Lys Phe Arg Ser Ser Trp Val Phe Ile Ala Ala Lys Gly
185 190 195

Leu Glu Leu Pro Ser Glu Ile Gln Arg Glu Lys Ile Asn His Ser
200 205 210

Asp Ala Lys Asn Asn Arg Tyr Ser Gly Trp Pro Ala Glu Ile Gln
215 220 225

Ile Glu Gly Cys Ile Pro Lys Glu Arg Ser
230 235

<210> 92

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 92

aatgtgacca ctggactccc 20

<210> 93

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 93

aggcttggaa ctcccttc 18

<210> 94

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 94

aagattcttg agcgattcca gctg 24

<210> 95

<211> 47

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 95

aatccctgct cttcatggtg acctatgacg acggaagcac aagactg 47

<210> 96
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 96
ctcaagaagc acgcgtactg c 21

<210> 97
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 97
ccaacacctag cttccgcctc tacga 25

<210> 98
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 98
catccaggct cgccactg 18

<210> 99
<211> 20
<212> DNA
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<220>
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